

## NEW NORTH AMERICAN DISTRIBUTION RECORDS FOR FOUR SPECIES OF STREPSIPTERA<sup>1,2</sup>

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**ABSTRACT:** New state records are reported for *Halictophagus acutus* Bohart from Georgia and Kentucky, *Caenocholax fenyesi* Pierce from Georgia and Arizona, *Elenchus koebeli* (Pierce) from Georgia and Kentucky and *Triozocera mexicana* Pierce from Kansas, Arizona, New Mexico, and Oaxaca, Mexico. The presently known distribution and hosts of these four species is given.

The known distribution of many North American Strepsiptera is very limited. New distribution records are most often obtained as a result of specimens being collected coincidental with other studies, as was the case with the records reported herein. While blacklight collecting in Georgia, Kentucky, New Mexico and Mexico, we obtained new distribution records for 4 species of Strepsiptera. Two new state records were found while examining the Strepsiptera collection at the University of Arizona.

*Halictophagus acutus* Bohart (Halictophagidae) was originally described from Tennessee, Louisiana, Pennsylvania, the District of Columbia and Atzacapozalco, D.F., Mexico (Bohart 1943). All specimens were parasitizing *Draeculacephala* spp. (Cicadellidae). No mention of this species has been made in the literature since the original description.

We collected 1 male in Savannah, Georgia, September 28, 1971, with a blacklight trap. Five adult males were dissected from puparia on *Draeculacephala* spp. collected during September and October, 1975, in Lexington, Kentucky. Many additional male puparia, females and larvae were collected in Lexington. Some *Draeculacephala* specimens had multiple parasitism with one having six females and three males of *H. acutus*. The present distribution of *H. acutus* is given in Fig. 1.

*H. acutus* appears to be host specific — only parasitizing leafhoppers in the genus *Draeculacephala*. As this genus is widely distributed in the U.S., *H. acutus* probably occurs throughout much of the eastern U.S. This parasite appears to be a potentially useful control agent for *Draeculacephala*. During late summer 1975, some populations of these leafhoppers

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in Fayette County, Kentucky, had a majority of individuals parasitized by *H. acutus*. The percentage of parasitism varied locally, but the parasites were very common and parasitized leafhoppers could be found in almost all areas sampled.

*Elenchus koebeli* (Pierce) (Elenchidae) has been reported from Ohio (Pierce 1909), Louisiana (Khalaf 1968) and Mississippi (Khalaf 1969). We collected 14 males from Savannah, Georgia during July-October, 1971 and two males in Kentucky: 1 on August 22, 1975 in Pike County and 1 on July 16, 1971 in Larue County (collected by P.H. Freytag). This species is now known from Ohio, Louisiana, Mississippi, Kentucky and Georgia (Fig. 2). Bohart (1941) gives the host of *E. koebeli* as "various species of *Liburnia*".<sup>5</sup>

*Caenocholax fenyesi* Pierce (Myrmecolacidae) appears to be widely distributed in the Western Hemisphere. It has been reported from Mexico (Pierce 1909), Panama and Argentina (Bohart 1941), Florida (Meadows 1967), Louisiana (Khalaf 1968) and Mississippi (Khalaf 1969). We collected 13 males during July and August, 1971 in Savannah, Georgia. Additionally, one male from the Santa Rita Mountains, Madera Cn., Arizona collected July 28, 1960, is deposited in the University of Arizona collection. The present distribution of this species is given in Fig. 3. The host of *C. fenyesi* is unknown.

*Triozocera mexicana* Pierce (Mengeidae)<sup>6</sup> is the only known species of *Triozocera* in North America and the only genus of Strepsiptera known to parasitize Cydnidae (Hemiptera). It has previously been reported from Cordoba, Veracruz, Mexico (Pierce 1909), Texas (Bohart 1941), Mississippi (Khalaf 1968), Louisiana (Khalaf 1969), Florida (Meadows 1967), Kentucky (Johnson and Sperka 1972), Georgia (Johnson 1973), and Oklahoma (Shepard 1979). We collected one male at Tehuantepec, Oaxaca, Mexico, March 18/19, 1976 and one male at Las Cruces, New Mexico, July 28/August 3, 1975. In addition, the University of Arizona has several specimens of *T. mexicana* which were collected at Cochise Stronghold, Cochise County, Arizona, during the summer of 1970 by R.J. Shaw and 1 specimen from Riley County, Kansas, collected by R.L. Bertwell in May 1970. Besides these new state records, 47 male specimens were made available to us which were collected during July and August 1978, in Wichita Falls, Wichita County, Texas by J.C. Cokendolpher and K.M. Brown. These specimens represent a new Texas county record and are deposited in the Midwestern University Museum and Texas Tech

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<sup>5</sup>This genus is now referred to as *Delphacodes*.

<sup>6</sup>Whether *Triozocera* belongs in the family Corioxenidae or Mengeidae is controversial. Most North American literature places the genus in Mengeidae.



Fig. 1. Distribution of *Halictophagus acutus* Bohart. Closed squares indicate new distribution records and open squares previous records.



Fig. 2. Distribution of *Elenchus koebeli* Pierce). Closed squares indicate new distribution records and open squares previous records.



Fig. 3. Distribution of *Caenocholax fenyesi* Pierce. Closed squares indicate new distribution records and open squares previous records.

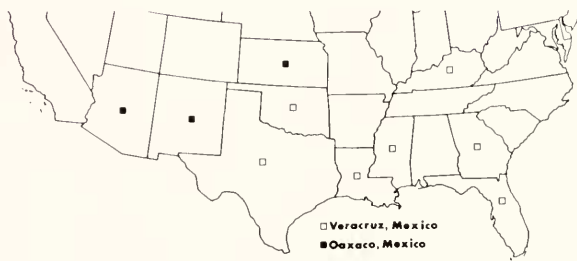


Fig. 4. Distribution of *Triozocera mexicana* Pierce. Closed squares indicate new distribution records and open squares previous records.

University insect collection.

*T. mexicana* is potentially economically important. It parasitizes *Pangaeus bilineatus* (Say) (Johnson 1973) which is a major pest of peanuts in Texas (Smith and Pitts 1974).

*T. mexicana* has now been reported from Mississippi, Louisiana, Florida, Georgia, Kentucky, Kansas, Texas, Oklahoma, New Mexico, Arizona, and the states of Oaxaca and Veracruz in Mexico (Fig. 4). It is probable that it occurs throughout the distribution area of the host, *P. bilineatus*, which is given by Froeschner (1970) as "across the eastern half of the United States from Massachusetts south to Florida and Bermuda, west to South Dakota, Nebraska, Kansas, Oklahoma, and Texas, thence through Arizona into southern California, and south into Mexico and Guatemala."

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